Universal Symbols in Health Care

Developing a Symbols-Based Wayfinding System: Implementation Guidebook

Produced by Hablamos Juntos, SEGDA

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About the Robert Wood Johnson Foundation and the Pioneer Portfolio
The Robert Wood Johnson Foundation focuses on the pressing health and health care issues facing our country. As the nation’s largest philanthropy devoted exclusively to improving the health and health care of all Americans, the Foundation works with a diverse group of organizations and individuals to identify solutions and achieve comprehensive, meaningful and timely change. Projects in the Pioneer Portfolio are future-oriented and look beyond conventional thinking to explore solutions at the cutting edge of health and health care. When it comes to helping Americans lead healthier lives and get the care they need, the Foundation expects to make a difference in your lifetime.

SEGD is the global community of people working at the intersection of communication design and the built environment. Through university-level educational curricula, professional development workshops, publications, and research initiatives, SEGD’s mission is to provide educational resources to designers, fabricators, and users of visual communications in the built environment.
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Executive Summary

Visitors entering through the doors of a hospital or other health care facility—especially those experiencing stress over the illness of a loved one—often experience a daunting environment. Long corridors, multiple elevator banks, connections among various buildings, and the complex routes often required to reach their final destination can add to the stress.

Magnifying this problem is the increasing demands on the health care system by individuals with limited English proficiency (LEP) or those with low reading proficiency. Today, one of the most important issues facing health care administrators is providing services to LEP populations. Helping them navigate complex health care facilities is a key objective.

In 2004, with funding from the Robert Wood Johnson Foundation, Hablamos Juntos formed an ongoing partnership with SEGD (the Society for Environmental Graphic Design) to develop and test the use of graphic symbols in health care facility signage. Phase I of the Universal Symbols in Health Care (USHC) research, completed in 2006, concluded that symbols can be effective in helping visitors navigate health care facilities. Testing showed that patients found signage incorporating graphic symbols easier to understand than purely text-based signage. As a result of the Phase I research, a set of 28 Universal Symbols in Health Care was designed for use in health care wayfinding systems.

After the release of the original USHC set, it became clear that the selection, design, and integration of symbols into one unified set—a set that could be adopted universally by health care facilities of varying size, function, and complexity—would be an ongoing process. Health care facilities that adopted the initial symbol set helped identify several key issues related to integrating symbols into the health care environment, including how to:

- Add and integrate new symbols into an existing set of health care symbols
- Most effectively name destinations in association with symbol use
• Develop and use symbols that can support multiple destinations
• Develop symbols that can serve a diversity of functions including emphasizing health or illness

These questions became the focus for a second phase of research, begun in 2008. With continued funding from the Robert Wood Johnson Foundation’s Pioneer Portfolio, in addition to support from the SEGD Education Foundation, Phase II research was designed to encourage widespread adoption of the symbols by health care facilities serving LEP or limited-reading populations. The project had three primary objectives:

1. Support implementation of symbols-based wayfinding systems using evidenced-based practices in as many as four health care facilities.
2. Document the implementation experience, produce tested best practices for health care facilities, and promote awareness of symbols-based wayfinding as a solution for multilingual environments.
3. Add 20 to 30 new symbols to the Universal Symbols in Health Care symbol set.

**Project Team**
Phase II involved a multidisciplinary team of designers, students, researchers, and other technical experts. A consortium of four university-based design schools developed a process for researching new symbols to be added to the USHC set. Four Innovator Health Care Facilities served as test cases for symbol design and implementation, and fully underwrote the costs of participation and implementation of the systems. Design firms with expertise in health care wayfinding and symbol design identified best practices and conducted experience analysis as the basis for developing wayfinding systems specific to each Innovator facility. Other internationally recognized consultants contributed their expertise in symbols testing, symbol development, and legibility. A Technical Expert Panel reviewed the research and wayfinding analyses for accuracy and appropriateness to the specific needs of the Innovator facilities.
Symbols Design and Testing
In 2008, a university consortium was formed to develop a process for adding new symbols to the USHC set, essentially providing a sustainable framework for ongoing symbol design and evaluation.

Research and initial design took place in 2009 and 2010 at the University of Cincinnati, Iowa State University, Kent State University, and California Polytechnic State University. The process began with an in-depth review of the Innovator Facilities, destination hierarchies, and referent needs as the basis for symbol design.

Based on research methods employed in the development of the original symbols set, the university teams created a total of 155 candidate symbols for 22 referents. These were narrowed to five candidate symbols per referent category by a Delphi (expert) panel using a web-based survey. The narrowed list of candidate symbols underwent comprehensibility testing at three sites, using modified ISO testing methodologies on a linguistically diverse group of health care facility users. As a result of the comprehensibility testing, 22 symbols were chosen as additions to the original USHC set.
Symbol designer Mies Hora (Ultimate Symbol) was engaged to design the final set of symbols. Hora also refined the original set for consistency. The result is a comprehensive, 50-symbol set that adheres to internationally recognized symbol design standards. While the symbols library will always remain a work in progress, the goal is to develop a set of symbols that will achieve acceptance among designers and facility managers. The entire, updated *Universal Symbols in Health Care* set is presented in this guidebook and can also be downloaded from the *Hablamos Juntos* or *SEGD* websites.

The university consortium’s research and design work is documented in two reports: *Signs That Work Phase 2: Symbol Design Curriculum Report* and *Signs That Work Phase 2: Symbol Design Research Report*.

**Experience Analysis**

One of the key factors in developing a successful wayfinding system is analysis of the visitor wayfinding experience. Experience analysis, including interviews with visitors and facility staff, creates a complete picture of the facility’s wayfinding needs and helps determine the effectiveness of symbols.
Experience analyses for the Phase II research were led by Corbin Design, a wayfinding and environmental graphic design firm based in Traverse City, Michigan. The Innovator Health Care Facilities contributed expertise including staff time, design contributions, and research support. The analyses consisted of two parts:

1. Pre-design Analysis - Pre-design analysis documented visitor and staff perceptions of the existing wayfinding experience through in-depth interviews and established a baseline for comparison. From this analysis, wayfinding strategy recommendations were developed for each of the facilities.

2. Post-design Prototype Analysis - Post-design analysis tested visitors’ experiences using a prototype version of the final wayfinding program. Recommendations from these results were incorporated into the final design processes for each of the Innovator facilities.

Wayfinding Recommendations and Analysis
Based on wayfinding goals identified during the experience analyses, specific design recommendations were provided to guide design development for the wayfinding programs.

After each of the facilities developed their design concepts, Philip Garvey of the Pennsylvania Transportation Institute analyzed the following practices:
• The size of a comprehensible symbol set
• Permissible terminology approaches for destination names linked to the symbols
• Recommendations for symbol size and position on wayfinding and identification signs
• Recommendations for the use of multiple languages in coordination with symbol signs
• The use of directories, print, web, and educational support for symbols

Wayfinding analysis was incorporated into specific recommendations that the facilities used to develop their final sign designs. *Hablamos Juntos Phase II Post Audit Report* outlines the final implemented programs.

**Final Review**

Final research and recommendations were reviewed by the project’s Technical Expert Panel to ensure they met recognized standards and fulfilled the needs of the facilities. Panel review focused on three primary areas:

• Ensuring that the final set of symbols developed by the academic consortium and symbols designer met the research and quality standards outlined at the beginning of the project
• Reviewing the final design and strategy recommendations made by the project team to ensure they are consistent with conclusions drawn from the research
• Reviewing the Implementation Guidelines to ensure the project’s educational goals are being met

**Implementation Guidebook**

*Developing a Symbols-Based Wayfinding System: Implementation Guidebook* was designed to use the lessons-learned at the four Innovator Health Care Facilities to help health care executives, facility managers, and designers understand the comprehensive process of developing successful wayfinding projects. In five parts, it summarizes recommendations from the Phase II
research and provides access to more in-depth information on the key issues involved with implementing symbols-based wayfinding systems:

- Part 1: Formulating a Symbols-Based Wayfinding Strategy
- Part 2: Destination Hierarchy and Referent Naming
- Part 3: Design and Development Using Symbols
- Part 4: Design Testing and Analysis
- Part 5: Symbol Support and Education

Each part contains specific recommendations that can be applied to all health care facilities based on the Phase II research; provides case studies of Innovator site methods and experiences; and offers additional resources in the form of in-depth technical reports, additional case studies, and other tools. Four attachments included with this guidebook provide supplemental information that is imperative to the implementation of a symbols-based wayfinding system. Additional resources cited in this guidebook can be downloaded from the Hablamos Juntos or SEGD websites.

**Continuing Dialogue**

Examples and case studies enrich and deepen the understanding of symbols-based wayfinding design. If you have developed a symbols-based health care wayfinding program and are willing to share your experiences, contact craig@segd.org to add to the library of symbols-based systems.
Universal Symbols in Health Care

Developing a Symbols-Based Wayfinding System: Implementation Guidebook

Part 1:
Formulating a Symbols-Based Wayfinding Strategy
PART 1: Formulating a Symbols-Based Wayfinding Strategy

Wayfinding Strategy Development

The first stage of a successful wayfinding program is the development of a wayfinding strategy to guide it. The basis for the wayfinding strategy is the strategic plan, a blueprint that defines the needs of the facility, the goals of the wayfinding program, and the management resources required.

At the four Innovator Health Care Facilities, extensive visitor experience analysis and research were conducted as the basis for identifying final wayfinding strategies specific to the needs of the facilities. The Innovator Facility Matrix summarizes the strategies developed for the four sites, while the Hablamos Juntos Phase II Post Audit Report documents the in-depth analysis undertaken by a team of professional wayfinding design consultants.

Before embarking on a symbols-based wayfinding program, health care facilities should create a wayfinding strategic plan that includes the following elements:

- **Mission Statement and Program Goals** - Every facility has unique program goals and requirements based on the needs of its patient population. The wayfinding strategy must incorporate and respond to these needs. The mission statement should include a general facility description, wayfinding goals (including incorporation of symbols), wayfinding issues, and key project goals. Defining these goals early is imperative to keeping the design process on track with core objectives.

- **Facility Review** - Every facility develops a wayfinding program under unique circumstances. Often there is an existing wayfinding system that must be removed or incorporated into a larger program. Some facilities are new buildings, but many are additions or renovations integrated into a larger building or campus. A facility review inventories physical spaces as a basis for developing a design direction.
• **Stakeholder Engagement** - Identifying stakeholder groups and engaging them in the process of developing a wayfinding strategy is crucial. The stakeholder plan outlines a clear approach to engaging people who represent diverse groups including staff, administration, volunteers, patients, families, health literacy organizations, and community members.

• **Preliminary Destination Criteria** - Identifying and prioritizing major destinations within the health care facility is an important early step in developing a system that meets the needs of patients and visitors. An early outline of these destinations makes it easier to chart a course for including symbols in the design process.

• **Strategy for Hiring or Working with a Designer** - Health care facilities often need to work with professional designers who have expertise in the unique wayfinding needs of health care environments and the use of symbols to enhance the visitor experience. Articulating a clear approach to working with designers may include reporting responsibilities, project management, and other issues that will help expedite implementation of the wayfinding project.

**The Symbols-Based Wayfinding Program Design and Implementation**

_Checklist (Attachment B)_ identifies the key health care facility needs and goals for symbols wayfinding integration.

**Key Wayfinding Strategy Issues**

The four Innovator Health Care Facilities developed distinct wayfinding and symbol strategies built around their population needs, resources, facility types, facility design, and ongoing development issues. Comparison and analysis of the four projects revealed some key differences in strategy direction depending on facility type, size, and complexity:

• New facilities and renovated facilities have much different signage needs. New facilities have greater flexibility in design and implementation, since
the entire system can be developed at once, while renovated facilities may require a phased strategy for system design and implementation.

- The stakeholder and management needs of small facilities are much different than large hospitals. When a management team is small, sign systems may need to be much simpler and easier to install and change.

- Complex facilities on multiple floors require a much different approach than simpler facilities. The more information is needed for wayfinding, the greater the complexity of the wayfinding system.

The Innovator site projects also revealed key issues that were similar in spite of the facilities’ differences in size or complexity. Each of the four sites aimed wayfinding programs at:

- Minimizing the use of personnel to assist in wayfinding

- Integrating symbols as only one part of a comprehensive wayfinding approach

- Proactively managing the design and development of the system

The following two case studies illustrate the similar and unique issues facing health care institutions addressing wayfinding needs.
Case Studies: Wayfinding Strategy

International Community Health Services (ICHS)
A small, newly built community clinic in Seattle, ICHS is part of a two-clinic system that serves a population comprising more than 50 different language groups, with Chinese language speakers the most prevalent. The clinic focuses primarily on daily health services such as dental and pharmacy, as well as medical education.

Strategic Plan Summary
Mission
- Develop a simple, easy-to-install system that can be implemented by a small staff on a small budget.
- Design for replication in other facilities as they are added to the system.
- Provide a high level of visitor support for the large number of retail-level customers.

Facility Review
New facility with nearly all public services on one floor

Stakeholders
Small staff, with one planner and one facilities manager handling all sign planning issues

Preliminary Destination Criteria
Small number of important destinations including Dental, Pharmacy, Laboratory, and Family Practice

Designer Selection
Staff worked with a design consultant from concept development through guideline development; final planning was coordinated between designer and facility staff.
Women & Infants Hospital
This neonatal and pediatric care facility in Providence, R.I., is part of a large health care campus. The facility is undergoing an extensive renovation with a large new addition expanding facilities and public space.

Strategic Plan Summary
Mission
- Improve patient safety and satisfaction with the wayfinding system.
- Expand and improve on an existing symbols-based system and be a model for future expansion into the health system.

Facility Review
Older multi-floor facility linked to a new building by a large central public reception space

Stakeholders
Extensive team led by a wayfinding consultant working with the medical system, coordinating the work of marketing staff, the facilities department, and internal sign fabricators

Preliminary Destination Criteria
Three main wings, each with a set of key destinations and support destinations
PART 1: Additional Resources

Attachment A: Innovator Facility Matrix
This spreadsheet summarizes the Innovator facilities and the wayfinding strategies developed for each.

Attachment B: Symbols-Based Wayfinding Program Design and Implementation Checklist
This list identifies the key health care facility needs and goals for symbols wayfinding integration. It also includes sample RFPs and RFQs for symbols-based wayfinding projects.

Case Study: Concentra
The wayfinding program developed for Concentra was an early project integrating health care symbols into a larger wayfinding program.

Hablamos Juntos Phase II Post Audit Report
This report tracks the strategies developed by each of the Innovator Health Care Facilities as well as the outcomes of the strategies’ implementation.
Universal Symbols in Health Care

Developing a Symbols-Based Wayfinding System: Implementation Guidebook

Part 2: Destination Criteria and Referent Naming
PART 2: Destination Hierarchy and Referent Naming

During the early planning stages in the wayfinding process, it is important to link the development of symbols to the referents (destination names) they will represent. Creating a hierarchy of destinations guides the development and application of symbols. While all health care facilities are different, they generally share similar destination hierarchy structures:

- **Hospital or System Identification** - The top of the hierarchy is the facility’s brand identity, which can be a combination of words and symbols. It is often incorporated into every wayfinding and identification element in the facility.

- **Building, Zone, or Section Identification** - Health care facilities are often divided into building zones and sections that contain multiple destinations. Graphic systems describing these areas often include colors, numbers, letters, names, or unique symbols.

- **Primary Destinations** - Major destinations often relate to specific functions and services in a health care facility and are the best candidates for health care symbols.

- **Support Destinations** - These secondary destinations, such as restrooms and cafeterias, are common to many large facilities. Ideally, the symbol sets depicting support destinations are common among health care facilities.

- **Room and Floor Addresses** - Underlying all destination systems in a health care facility are room and floor addresses that can be designated using a combination of names, letters, and numbers.

Different types of health care facilities have different approaches to hierarchies. For example, in-patient facilities often must integrate room addresses into the overall destination hierarchy, while clinics may be built around a small set of destinations. Health care campuses and multi-floor facilities also have unique destinations, including separate buildings and zones that are incorporated into the hierarchy.
• **Number of Symbols** - Research at the four Innovator sites showed that hospital visitors have difficulty telling symbols apart when one set contains more than 16 unique symbols. Establishing a strong destination hierarchy keeps the number of symbols manageable by grouping them by building, zone, or floor.

• **Symbol/Destination Names** - Most health care facilities desire flexibility when developing destination names for their facility. There are often political and cultural reasons behind the naming of destinations, including linking names with the specialization of doctors or using names that reflect the role of the facility as a clinic or full-service hospital. Testing at the Innovator sites showed that multiple destination names can be associated with one symbol. Destination names were effective when they followed certain guidelines, including:

  ~ **A close visual link with the symbol** – For example, in testing the symbol for “Cardiology,” users were able to match heart imagery with the terms “Cardiology Department,” “Cardio-Pulmonary Services,” “Heart & Disease Disorders,” and “Cardiovascular Medicine.”

  ~ **A link between function and location** – Symbols generally refer to a health care function and can be linked to many types of locations as long as the function remains in the name. In testing, terms like “Unit,” “Center,” “Clinic,” “Department,” and “Services” worked well to indicate place as long as the function remained linked to the symbol. The opposite does not hold true. If the function and the symbol imagery are not visually linked, users will not make the connection easily.

![](image)

In testing of the “Intensive Care” symbol, only terms linked to the function of the care unit were effective. Terms linked to a place did not work as well.

<table>
<thead>
<tr>
<th>Symbol/Destination Names</th>
<th>Average Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Critical Care</td>
<td>4</td>
</tr>
<tr>
<td>Intensive Care Unit</td>
<td>4</td>
</tr>
<tr>
<td>Intensive Care</td>
<td>4</td>
</tr>
<tr>
<td>Cardiac Intensive Care</td>
<td>3</td>
</tr>
<tr>
<td>Neonatal Intensive Care</td>
<td>1.5</td>
</tr>
<tr>
<td>Pediatric Intensive Care</td>
<td>1</td>
</tr>
</tbody>
</table>

0-5 Scale
• **Grouping Destinations** - Using multiple symbols for one destination is not encouraged, but using one umbrella symbol for multiple destination names can be successful.

For example, the symbol for the function “Imaging” can serve as an umbrella for multiple imaging functions in one location, including radiology, mammography, and CAT Scan, even though there are individual symbols for these functions as well. Similarly, testing showed that symbols like “Billing Department” can be used effectively for all billing functions in a health care facility.

• **Combining health care symbols with other universal symbols** - Universal symbols used in transportation and for accessibility can also be part of a health care symbol set. When combining these symbols into one set, it is important to use color, shape, and style consistently unless there is a specific design strategy behind the differentiation.

The following case study illustrates how symbol color, shape, contrast, and size can be used to differentiate various functions or spaces in a health care facility.
Case Study: Destination Hierarchy and Referent Naming

Women & Infants Hospital

Women & Infants Hospital had experimented with symbols-based wayfinding before its facility renovation, and developed a plan linking health care symbols, building identity, and the room-numbering system.

Building Identification

The building is part of a large campus, so building identification was considered less necessary/prominent for the interior wayfinding system.

Building Zones and Floors

The facility's two main sections, Main Building and South Pavilion, are marked with major gateways and directory signs at the main entrance. These identities are not as important for interior wayfinding.

Primary Destinations

Eight destinations in the Main Building and three in the South Pavilion are identified by health care symbols.

Support Destinations

Five destinations (including cafeteria, bank, and restrooms) are identified by circular symbols different from the square health care symbols.

Room Addresses

Room numbers and addresses appear as a subset to the primary destination areas on directional and destination signs.
**Destination Names**

In most cases, the hospital used the destination names assigned with the USHC symbols set. The most significant exception is Pediatrics. Because the facility is devoted to women’s health during delivery, the terminology was changed to focus on natal care. To ensure that this approach is well understood, the facility is adding explanatory handouts to its wayfinding program.

Symbols that represent separate levels in a destination hierarchy can be differentiated by color, shape, positive/negative contrast, or size.

At Women & Infants Hospital (left and top), symbols used for support destinations (i.e., restrooms, cafeteria) are a different shape than those used for medical departments.

At Children’s Mercy Hospital (bottom), symbols for the emergency room hospital zones are different colors than the other symbols.
PART 2: Additional Resources

Attachment C: Universal Symbols in Health Care

Universal Symbols in Health Care presents the entire set of 50 health care symbols produced as a result of the Hablamos Juntos Phase I and Phase II research. Individual, reproduction-ready artwork in PDF and EPS formats is also available for each symbol. These files can be downloaded from Hablamos Juntos or SEGD.


A consortium of four universities researched and completed initial design work for new symbols added to the Universal Health Care Symbols set. Their work is documented in these two reports.

Testing Universal Symbols to Support Implementation in Health Care Facilities Signage

This report contains research from the symbol/destination matching tests.

At International Community Health Services in Seattle, symbols are used as an umbrella for several similar functions in the clinic. In this case, the “Dental Clinic” symbol is also used as an umbrella visual for “Dental Registration” and “Dentist’s Office.”
Universal Symbols in Health Care

Developing a Symbols-Based Wayfinding System: Implementation Guidebook

Part 3:
Design and Development Using Symbols

Produced by

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PART 3: Design and Development Using Symbols

The success of symbol-oriented wayfinding systems lies in their ability to be seen and easily understood. While this may seem simple and obvious, health care facilities are often constrained in their ability to provide effective and legible signs. Dark spaces, tight and cluttered corridors, and high traffic make incorporating symbols a challenge. Developing effective symbols-based sign systems requires balancing legibility issues with the constraints of the facility.

At the same time, designers must also communicate design best practices so they can be implemented effectively by the facility when changes and additions are made. Health care facilities and designers should consider several key design issues specific to symbols in health care environments:

- **Symbol Size, Contrast, and Consistency** - The most significant factor affecting the use of symbols in health care facilities is size. When symbols are small in comparison to text, they are either ignored or treated as secondary information. Symbols also need to contrast strongly with their surrounding environment to be seen in the subdued lighting common to health care facilities. They should also be consistent in size. Research shows that visitors have difficulty recognizing the same symbols when they are used in too many different sizes within a wayfinding system.

- **Symbol Location and Consistency** - Consistency is not only a key factor in the size of symbols, but also in their location. Research also indicated that people expect similar signs to be located around similar-appearing decision points in the same facility. If a wall-mounted directory is seen at one corner, the observer will expect the symbol to be in a similar location at the next decision point.

Design and Development Using Symbols

- Develop a design vocabulary linking all sign elements to the wayfinding strategy.
- Develop guidelines for the placement of signs based on the wayfinding strategy.
- Ensure that symbols are large enough to be legible on all signs.
- Utilize only a few different symbol sizes.
- Place symbols in consistent locations on signs.
- Place signs in consistent locations within the facility.

The wayfinding program at Lankenau Hospital in Wynnewood, Pennsylvania (developed by exit), uses large-scale, high-contrast symbols at key decision points. Bright lighting significantly enhances sign and symbol legibility.
• **Legible Identification Signs** - Identification signs are often where wayfinding systems are less effective, with symbols that are too small and out of the line of site. Successful wayfinding programs use large symbols and often contain multiple signs, both parallel and perpendicular to the viewers’ line of site. This is a practice that has been reinforced in accessibility guidelines. The ADA requires all symbols to be in a 6-in. field.

• **Sign Vocabulary and Guidelines** - During the design stage it is very important for designers to communicate how the entire wayfinding system works while presenting the design of individual sign elements. Two documentation approaches are crucial to successfully communicating sign system design:

  ~ A sign vocabulary document with a visualization and written description of every sign being utilized in the system to show the interrelationship between individual sign elements.

  ~ Guidelines that provide requirements and recommendations for the most legible sign locations.

Sign vocabulary and guidelines for the four Innovator Facilities can be found in the *Innovator Sign Design Vocabulary* documents.
Case Study: Sign Vocabulary and Guidelines

Children’s Mercy Hospital
The wayfinding program for Children’s Mercy Hospital in Kansas City, Missouri, optimizes symbol legibility in the face of two difficult issues. The extensive number of departments and zones require large numbers of building unit icons, health care symbols, and support symbols. In addition, low ceiling heights and subdued artificial lighting made the use of large overhead signs difficult. In response, the wayfinding program incorporated the following strategies:

Small number of sign types
The hospital employs only three major sign types: a large, wall-mounted sign that can serve as both a directory and wayfinding sign, large directional signs at major decision points, and identification signs.

Zone identification to structure information
The use of color-coded zones is crucial to supporting the large number of symbols used in the facility.

The sign vocabulary developed for Children’s Mercy Hospital shows how symbols are deployed across a range of sign types. (Note: placeholders are used for incomplete symbols.)
**Large symbols**

All wall-mounted signs use larger (at least 2-in.) symbols than those typically seen on standard wall-mounted directory signs and identification signs.

**Only three sizes for symbols**

Only three sizes are used for symbols: 3-in. symbols for wall-mounted signs, 6-in. symbols on identification on support signs, and 12-in. symbols for identification on primary destination signs.

**Multiple consistent directory signs at every major decision point**

Directory signs were placed at multiple corners of every major decision point in the facility, perpendicular to visitor line of site in all directions. Directory wayfinding signs were configured similarly, with health care symbols, support symbols, and unit symbols in the same locations on the signs.

*At Children’s Mercy Hospital, clear guidelines for locating signs at key decision points made the sign system more legible and reduced clutter.*
PART 3: Additional Resources

Attachment A: Innovator Facility Matrix
This spreadsheet summarizes the Innovator Facilities and the wayfinding strategies developed for each.

Innovator Sign Design Vocabulary
These design documents show the sign vocabulary and placement guidelines for the four Innovator Facilities.

Case Study: Lankenau Hospital
This project by ex;it and AGS utilizes many of the design strategies included in the Phase II research.

Innovator Site Picture Gallery
This picture gallery shows all the Innovator Facility Sites with and without prototype signs.
Universal Symbols in Health Care

Developing a Symbols-Based Wayfinding System: Implementation Guidebook

Part 4:
Design, Testing and Analysis

Produced by

With support from

Hablamos Juntos
SEGDN
pioneer
Robert Wood Johnson Foundation
PART 4: Design Testing and Analysis

Testing and analysis play a crucial role in the development of a wayfinding system. Testing allows facilities to define and prioritize the most important design issues and also provides a venue for ideas and scenarios to be analyzed under real-world conditions. All health care facilities should develop a testing and analysis strategy as part of their overall planning and design process. This process should include, but not be limited to:

- **Pre-Design Interviews** - Pre-design interviews with visitors and staff can clearly define the key priorities in developing and managing an effective wayfinding experience. Early interviews can more clearly focus design issues including:
  ~ Facility needs
  ~ Key destinations
  ~ Staff support for system changes

- **Pre-design Wayfinding and Experience Analysis** - Based on the priorities of the institution, identified in pre-design interviews and other research, each step of the wayfinding experience should be analyzed, including:
  ~ Key decision points throughout the facility
  ~ Effectiveness of existing signs and landmarks
  ~ Support materials including maps and graphics

- **Symbols and Destination Terminology** - While recommended destination names are included with the USHC symbols, many facilities will want to develop their own destination names. When selecting destination names to be associated with symbols, a simple ranking test can identify how well visitors will match symbols and destination names.

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**Design Testing and Analysis**

Pre-design analysis should include clearly documented metrics for success that can be referred to throughout the design process and measured in Post-design analysis.

Incorporate funding for wayfinding and prototype analysis into the scope of work for planners and designers including prototypes developed during the design stage and a prototype wayfinding path developed prior to final implementation.

When testing destination names, review best practices of similar health care facilities.

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Pre-design surveys of health care users provide metrics needed as the basis for research goals.
A ranking test consists of two parts:

- Selecting names that most closely match the function of the destination
- Asking visitors to rate how closely the symbol is associated with the destination name on a scale of 0 to 5

This research can also be used to test destination names for comprehension.

- **Additional Symbol Design** - If the health care facility requires a symbol that is not included in the USHC set, other options include:
  - Adopting symbols from guides such as *Official Signs & Icons 2* by Ultimate Symbol
  - Designing additional symbols using guidance found in the *Signs That Work Phase 2: Symbol Design Research Report*
  - Partnering with a design firm or academic institution to develop additional symbols based on research methods developed in the *Signs That Work Phase 2: Symbol Design Research Report*

- **Prototype Wayfinding Test** - In this test, a wayfinding path is established using prototype signs (generally built out of a temporary material like foam core or vinyl) at key decision points in the facility. Test subjects are asked to find a destination using the prototype signs and are asked specific questions at each stage in the wayfinding process, including:
  - Are the signs well placed and easy to find?
  - Are the signs easy to understand?
  - Are the symbols on the signs easy to identify?
  - Did the signs help you find your way?
  - Did you use the symbols?
• **Prototype Wayfinding Test for Support Information** - Prototype testing can also be used to gauge the effectiveness of providing additional wayfinding support, including multiple languages, handouts, maps, and staff intervention. In this type of testing, subjects are asked to find a destination using successive layers of information, including:

~ Signs with just symbols
~ Signs with symbols and English language
~ Signs with symbols, English, and a third language
~ Signs with the addition of a graphic support
~ Signs with the addition of a map
~ Signs with the assistance of facility staff

By asking the same set of questions about the effectiveness of the signs with different layers of support, this process paints a clearer picture of visitor needs and the effectiveness of system elements in isolation. This approach was developed for testing with symbols, but the methodology can be applied to any project, by adding or subtracting elements crucial to wayfinding decision-making.

Prototype signs are generally made of temporary materials such as plastic or foam core, but should otherwise have the exact appearance of permanent signs.
Case Study: Design Testing and Analysis

Grady Memorial Hospital
Although all four Innovator sites benefited greatly from the testing process, testing at Grady Memorial Hospital in Atlanta was particularly productive in yielding data that shaped the wayfinding design process. This facility was tested twice: once to test the effectiveness of symbols generally, and a second time to test the effectiveness of the specific wayfinding program under development.

First-stage wayfinding test
The first-stage test focused on the effectiveness of symbols linked to multiple languages and print support. Testing showed that providing hospital visitors with a printed handout of the wayfinding symbol system was highly effective in helping them find destinations, while a generic campus map proved far less effective at supporting the sign system.

Pre-design interviews
Before the hospital’s full wayfinding program was developed, a series of interviews with hospital staff and visitors helped identify the best planning approach for integrating symbols into the wayfinding program as well as other ways to improve the visitor experience through wayfinding. These interviews contributed to the development of a wayfinding program based on identifying four distinct sections of the facility. Additional staff interviews increased the hospital’s understanding that a modular sign approach managed by an outside firm would be the most successful approach for ongoing implementation.

Pre-design wayfinding experience analysis
After the pre-design interviews, the expected wayfinding experience was analyzed based on interviews with staff and visitors. The pre-design interviews identified areas of difficulty at key decision points, including
the main entrance and elevator banks. This analysis formed the basis for the wayfinding system.

**Prototype wayfinding test**

In the second-stage test, a temporary prototype sign system was created and installed, including a lobby directory and map, wall- and ceiling-mounted directional signs, elevator directory signs, and identification signs. Thirty-two users participated in the test, including 15 native English speakers, 10 native Spanish speakers, and seven native Cambodian speakers. They were asked to find three destinations using all the signs in the system, including signs that included just the symbol, the symbol with English, and the symbol with English and Spanish.

**Design recommendations**

Several design recommendations resulted from the testing at Grady Memorial:

- The need for a much larger, more visible directory with larger symbols and handout support
- The importance of having only a few size changes in the symbols as well as incorporating larger symbols for identification and directory signs
- The importance of placing signs in consistent locations throughout the facility at key landmarks
- The need to better explain the color-coded facility sections and make these divisions easier to see in the interior design of the facility
PART 4: Additional Resources

*Symbol Usage In Health Care Settings for People with Limited English Proficiency - Part Two: Implementation Recommendations*

This project conducted in 2005 tested the effectiveness of symbols at Grady Memorial Hospital in coordination with signs, handouts, and maps.

*Signs That Work Phase 2: Symbols Design Research Report*

Developed by the university consortium that researched the USHC symbol set expansion, this report outlines best practices for the development and research of health care symbols.

*Hablamos Juntos Phase II Pre- and Post-Audit Reports*

These reports document the pre-design interview and analysis process as well as the final recommendations developed for the wayfinding systems.

*Testing Universal Symbols to Support Implementation in Health Care Facilities Signage*

This report reviews the methods used in analyzing all four Innovator Health Care Facilities.
Universal Symbols in Health Care

Developing a Symbols-Based Wayfinding System: Implementation Guidebook

Part 5:
Symbol Support and Education

Produced by
Hablamos Juntos

With support from
SEGUD
pioneer
Robert Wood Johnson Foundation
PART 5: Symbol Support and Education

Health care wayfinding systems are most effective when they provide users with additional support to aid them in navigating the facility. Successful health care wayfinding systems supplement sign-based wayfinding with other resources, including printed handouts, websites, maps, directories, and staff assistance.

Different health care facilities have widely divergent resources and support needs, and these unique circumstances will determine the support and education required. Implementation of wayfinding programs at the four Innovator sites revealed several key factors that affect the level of support needed:

- **The design of the facility’s information architecture** – Some Innovator sites, such as Grady Memorial Hospital and Women & Infants Hospital, have large visitor information kiosks near the main entrance, allowing for more human and print support than clinic environments such as ICHS, which have no information desk.

- **The level of human assistance in the facility** – Busy hospitals like Grady Memorial have much in common with transportation facilities, which have fewer staff to help with directions and require systems of kiosks and directories to attract attention and provide support.

- **The complexity of the hospital** – Facilities with a simple layout, such as ICHS or Women & Infants Hospital, found that a printed handout is more effective than a map in orienting visitors in the facility.

Research at the sites also revealed several key strategies for providing symbol support:

- **Directory Size, Location, and Contrast** - In the case of every Innovator Facility, testing showed that wall directories were too small, often the size of handout graphics. Directories can only be effective when they are easy-to-spot landmarks with symbols and text that can be easily seen in the environment.
At Women & Infants Hospital, directories were placed just beyond the large information desk at the entrance of the facility, and blended with the interior palette to such a degree that visitors found them difficult to spot. Symbol support is most effective when the directory is the first element the visitor sees on arrival at the facility and is a contrasting visual landmark in the environment.

- **Handouts** - When symbols are explained to visitors early, they are more likely to understand their use on signs. Printed handouts have proven to be especially effective as an educational tool for introducing symbols. They are easier to correct when updates or revisions are needed.
• **Maps** - Traditional printed maps are not effective in familiarizing visitors with symbols, because they are often very complex and include symbols and text that are small and difficult to read. To effectively support a wayfinding system, maps should contain only information linked to finding specific destinations, and should use symbols, colors, and other elements linked to the sign system and other print support materials.

• **Interactive and Web-based Technologies** - Health care symbols are increasingly being incorporated into websites, interactive kiosks, and cell-phone applications. *Attachment D, Interactive and Web Best Practices*, provides an overview of these technologies.

• **Human Assistance** - Health care staff should receive training on the symbols being used in their facilities, including training on how to use support materials and how to help visitors use them. Training on providing verbal directions is also important. Staff should be also be trained to avoid “Show don’t tell” assistance, which wastes time and discourages visitors’ ability to learn on their own. Innovator site testing showed that visitors who relied completely on staff assistance did not understand how to use signs for wayfinding, even in their own language.
Case Study: Symbol Support and Education

International Community Health Services and Grady Memorial Hospital

Both of these facilities relied on directories and print support for opposite reasons. ICHS, a small clinic with no information desk, needed a small directory to explain the services found in the facility. Grady Memorial Hospital, a complex facility with multiple entrances, sections, and floors, needed a large directory containing maps, symbols, and destination names in multiple languages.

User testing in both facilities found the directories at the main entrances of the facilities were well placed, but needed to be much larger, easy-to-spot landmarks with clearly highlighted symbols. Testing also showed that printed handouts in multiple languages should be used to explain the symbols used on the directories. Grady Memorial Hospital in particular, with four color-coded zones, needed a series of graphic and map elements to reinforce the destination hierarchy.

ICHS (above) used a small directory in its lobby to orient visitors around key destinations. After the prototype testing, the directory was made larger.

Grady Memorial Hospital (right) utilizes large table directories at key entry points.
PART 5: Additional Resources

Attachment D: Interactive and Web Best Practices

This report provides an overview of best practices for new health care wayfinding technologies including interactive kiosks, mobile web, and map programs.

Phase I Hablamos Juntos Research Report

This report analyzes the issues linking print graphics and maps to symbols-based wayfinding signs.

Case Study: MD Anderson Cancer Center

This presentation provides an overview of the facility’s wayfinding program and the non-signage elements developed to support it.

Sample Symbols Handouts

These handouts in multiple languages can be used as templates for health care facilities developing their own support materials.
ATTACHMENTS

Attachment A:
Innovator Facility Matrix

Attachment B:
Symbols-Based Wayfinding Program
Design and Implementation Checklist

Attachment C:
Universal Symbols in Health Care

Attachment D:
Interactive and Web Best Practices
Facility: Woman & Infants Hospital International Community Health Services (ICHS)

Description:
A facility for neonatal and pediatric care, Woman and Infants Hospital is a building that is part of a large healthcare campus. The facility is undergoing an extensive renovation with a large new addition expanding facilities and public space.

With two clinics serving over 16,000 patients yearly, ICHS services include medical, dental, behavioral health, Chinese medicine, and pharmacy. The vast majority of patients are LEP, with the most common languages being Cantonese and Vietnamese.

A team led by Facilities and the Department of Pediatrics will work with marketing staff to coordinate the wayfinding project. A leadership team led by Facilities with the Department of Pediatrics and the ER will provide input, review all signage for the project, and ensure efficient communication.

Goal Statement:
To improve patient safety and satisfaction with the wayfinding system. The wayfinding system is meant to expand and improve on an existing symbol-based system installed a year earlier and be a model for future expansion into the health system.

Implementation Strategy:
A modular design was hired to implement a new sign system. Selection of a firm with a contract for ongoing design services at the hospital including wayfinding, public art and branded interiors. Use of internal sign shop to make signs.

Hierarchy:
- Building identification
- Primary healthcare destinations
- Secondary destinations
- Support destinations
- Room numbers

Stakeholders:
- Medical staff
- Pediatric patients
- Family members
- Visitors

Additional Information:
- Improve wayfinding for all patients (especially the non-English speaking patients) at the hospital.
- To develop a simple, easy to install system that could be implemented by a small staff on a small budget. The sign system would be replicated in other facilities as they were added.
- To ensure efficient communication and maintain sign throughout our system.

A leadership team led by Facilities with the Department of Pediatrics and the ER will provide input and review all signage for the project. An extensive team led by a wayfinding consultant working with the medical system coordinating the work of marketing staff, facilities department and internal sign fabricators.

Selection of a firm with a contract for ongoing design services at the hospital including wayfinding, public art and branded interiors. Use of internal sign shop to make signs.
<table>
<thead>
<tr>
<th>Facility:</th>
<th>Woman &amp; Infants Hospital</th>
<th>International Community Health Services (ICHS)</th>
<th>Children's Mercy Hospital</th>
<th>Grady Memorial</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Recommenations:</strong></td>
<td><em>Increase size and improve locations of existing symbol based sign system.</em>&lt;br&gt;<em>Improve color contrast of sign system.</em>&lt;br&gt;<em>Increase prominence of identity for new wings of the facility.</em>&lt;br&gt;<em>Large signs near main help desk, initial point of contact.</em></td>
<td><em>The system must be very simple and easy to design and install.</em>&lt;br&gt;<em>Each space is unique and needs a branded identity.</em>&lt;br&gt;<em>There is no help desk so a large opening directory sign is important.</em>&lt;br&gt;<em>Signs must have very little information to cut through the clutter of information signs in the facility.</em></td>
<td><em>Since the main entry is through the parking garage wayfinding must be oriented throughout the facility and not from the front entrance.</em>&lt;br&gt;<em>Since a large number of symbols are being used, the use of existing zone hierarchies is important in the system.</em>&lt;br&gt;<em>Is important to reinforce destination names with large symbols at the beginning of each zone.</em></td>
<td><em>Make the system points to minor destinations.</em>&lt;br&gt;<em>Ensure consistency linking it to major destinations.</em>&lt;br&gt;<em>Increase the number of large symbols.</em>&lt;br&gt;<em>Develop a system maintained by outside models.</em></td>
</tr>
<tr>
<td><strong>Symbol Strategy:</strong></td>
<td><strong>Build health care and support symbols around the three main sections of the hospital. System built around the central help desk.</strong></td>
<td><strong>Small palette of symbols used multiple times to define and identify the sections of the clinic.</strong></td>
<td><strong>Large palette of symbols for each hospital zone. All symbols treated equally and consistently on signs.</strong></td>
<td><strong>Color coded system elevator cores with zone on directory signs on floors.</strong></td>
</tr>
<tr>
<td><strong>Sign Concept:</strong></td>
<td><strong>Large directory/wayfinding signs oriented around the three main section identities and followed up with symbol oriented directional and identification signs in each section.</strong></td>
<td><strong>One standard size wall mounted sign module used of all interior wayfinding elements. Multiple identification sign types integrated into the interior spaces.</strong></td>
<td><strong>One main directory/wayfinding and one ceiling wayfinding sign used at all major decision points and serving all destinations equally. Multiple identification signs used at destinations.</strong></td>
<td><strong>Entrance maps directing to zones directing to floor landing.</strong></td>
</tr>
<tr>
<td>Facility:</td>
<td>Woman &amp; Infants Hospital</td>
<td>International Community Health Services (ICHS)</td>
<td>Children's Mercy Hospital</td>
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<td>---</td>
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</tr>
<tr>
<td><strong>Component Parts:</strong></td>
<td>Directory</td>
<td>Wall Directory/Wayfinding</td>
<td>Wall Directory/Wayfinding</td>
<td>Directory</td>
</tr>
<tr>
<td>Pavilion Identity</td>
<td>SOUTHP AVILATION</td>
<td></td>
<td></td>
<td>Elevator Wayfinding</td>
</tr>
<tr>
<td>Wayfinding</td>
<td></td>
<td></td>
<td></td>
<td>Elevator Directory/Elevator Landing</td>
</tr>
<tr>
<td>Identification</td>
<td></td>
<td></td>
<td></td>
<td>Primary Destination Wayfinding</td>
</tr>
<tr>
<td><strong>Review and Recommendations:</strong></td>
<td>A successful wayfinding program based on simple concepts, limited palette and a focus on legibility.</td>
<td>Limited understanding of how to use symbols by the population requires extensive education effort from staff as well as explanatory print materials.</td>
<td>Consistent large symbol sizes were very effective.</td>
<td>Directory maps too small.</td>
</tr>
<tr>
<td></td>
<td>Increase directory size and improve location.</td>
<td>Directory needs to be much larger with definitions in multiple languages.</td>
<td>A larger orientation directory or handouts needed at the major entrance points of each zone.</td>
<td>Too many symbols.</td>
</tr>
<tr>
<td></td>
<td>Augment directories with print handouts, Web support, or maps at the help desk.</td>
<td>Immersive identification sign approach was very successful.</td>
<td>Too many legible symbols for the visitor.</td>
<td>Too many legible symbols for the visitor.</td>
</tr>
</tbody>
</table>
| | Maintain the strategy of a limited number of symbols at a large scale. | Standard module size worked well in the simple clinic environment. | Limit of eight slots on directional signs could prove difficult with the number of symbols in the system. | Staff training needed to maintain consistency.

**Symbols in Health Care**
### Health Care Wayfinding Programs

Symbols in Health Care

In environmental graphic design, particularly in health care facilities, it is important to have some basic information about the health care facility and its wayfinding needs. This information can be included in a design RFP and RFQ and act as a guide for the design development.

#### Schematic Design Stage

This is the stage where the overall design strategy is articulated by the designer and communicated to the health care facility. Often the schematic design stage is developed as a separate design program, providing a roadmap for ongoing implementation of the program. Symbols are incorporated into the wayfinding strategy and specific design elements at this stage. The schematic design stage includes the following elements:

- **Overall wayfinding strategy including integration of symbols**
- **Destination criteria**
- **Wayfinding experience diagram including stages in the wayfinding experience with specific design elements at each decision point**
- **Design vocabulary of design elements**
- **Typography, color, and symbol palette**
- **Instructions for ongoing management and maintenance of the program**

#### Design Implementation Stage

The final design and approaches for implementing the program include:

- **Strategy for placement of sign elements**
- **Schedule that determines placement of information on signs**
- **Final fabricator design drawings for bid process**
- **Final list and hierarchy of destinations**
- **Plan for fabrication and installation**

#### Guidelines

Health care wayfinding programs are ongoing programs and need a clear set of instructions for facilities staff to follow to ensure the program can be changed and maintained. Guidelines include:

- Review of the design strategy of the institution including incorporation of symbols
- Strategy for incorporation of new destinations into the existing destination criteria
- As-built drawings of final wayfinding elements with instructions for fabrication and implementation
- Support graphics including all symbols, colors, font standards, and print graphics
- Instructions for ongoing management and maintenance of the program

The RFP and RFQ are documents that health care facilities use to find a design firm for a design project. Designers can be employed either as a direct hire or as part of a bidding process, but no matter which method is used it is important for the facility to create a proposal structure with a specific set of goals or deliverables.

#### What is Needed for an RFP?

To create an RFP, it is important that the client has a full understanding of the basic tasks the designer will be expected to accomplish.

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To create an RFP, it is important that the client has a full understanding of the basic tasks the designer will be expected to accomplish.

- A summary of the entire project
- Preliminary design strategy
- Specific scope of services and deliverables at each stage
- Outline of what must be included in the proposal
- Proposal submission guidelines
- Project time-line
- Fee proposal

### What is Needed for an RFQ?

A RFQ is an approach that allows for greater flexibility and the ability to negotiate the scope of the project. This approach involves discussions on the final proposal, allowing for greater input from the designer. The RFQ process allows the client to submit initial bids, since there is no formal bidding process. The RFQ includes:

- Summary of the entire project
- Preliminary design strategy
- General scope of tasks
- Outline of what must be included in the proposal
- Proposal submission guidelines
- Request for the firm’s proposal
- Standards for the proposal
- Project time-line
Wayfinding program design already has a specific dollar value and does not have an RFQ process and ask the interview stage to provide more details on services that can be provided for wayfinding program design. It allows for more flexible negotiations with a design firm. If the facility is unclear whether they will be available or the hourly rate will be provided or the hourly rate for each stage in a good idea to provide a two-staged RFQ if the design process is being developed and pricing associated with each stage is not clear. The payment options can be taken in defining fee schedules the payment options process. There are a number of fee structures that can be taken in defining fee schedules common are:

- Hourly estimate: Designers can estimate their hourly rate for each stage in the design process. In this case the facility can align with an estimate of hours for project budget with the selected design firm.
- Fixed price: A fixed price as part of the RFP process that allows the design process around this cost is easier to accomplish as part of one fixed fee as part of the RFP process that allows the design process around this cost is easier to accomplish as part of a master plan or schematic design process than a full design and implementation program unless the facility is very clear of the scope of work and the number and type of design elements that are to be included.

**One Stage or Two?**

If the scope of work is unclear in the RFP, a two-stage RFP process with a fixed fee for the master plan and schematic design and a more tentative proposal for the design development and implementation work should be done. The facility can also split the RFP into two distinct projects, allowing for a clear early budget to be developed and a later budget to be created based on the master plan and schematic design. This allows the facility to more freely develop a program and get a full understanding of design and implementation costs. It is unethical to require the designer to develop schematic design documents without a fee in the proposal process.

**The Interview**

In the RFP process most facilities select the top two to three design firms for final interviews. Since the proposal and pricing has already been provided the interview can focus on specific details of the proposals along with the qualifications of the firm.

In the RFQ process the interview of top firms is more extensive with discussion about issues related to the project scope. With RFQs, transparency of the interview process is crucial to success. A teleconference call with the selected firms can provide the clarity needed for firms to submit proposals closely aligned with the goals of the institutions, while also discussing issues in an open dialogue.
— Templates for print graphics
— Templates for all symbols
— Final as-built design drawings
— Sample bid documentation
— Wayfinding strategy and site elements
— Recommendations for on-site

Proposal Outline for Submission
Prepare a proposal that is responsive to each RFP and that includes specific information per the sections detailed in this RFP and that includes required information in a logical format to assist the key individual in evaluating your firm’s ability to evaluate your proposal.

Project Team
— Identify design firm philosophy
— Identify the key individual who will be assigned to the project and provide sufficient information per the sections detailed above to clearly assess the individual’s experience. Furthermore, the key individual will be described as an overview of the projects this individual was involved in.
— Indicate any additional recommendations to assist the key individual in evaluating your proposal. Provide a brief description of the qualifications and experience of each project: (Limit: One per project)

Similar Project Experience
— Identify three (3) recent hospitality projects (size and complexity to the selected projects) that your firm has provided design services for. The selected projects should also be related to the services you were requested to provide. Provide resume details for each project: (Limit: One per project)
The following is a Sample Request for Qualifications (RFQ). All RFQs should include: The Facility Name, Name of the Facility, RFQ Contents: Project Description, Project Uniform Proposal Outline, Proposal Submission, Project Mission Statement, Project Submission, Project Mission Statement.

The Proposed Wayfinding System (RFQ) is seeking a team of qualified professional planners for both the expanded facility building. The system will include an indoor wayfinding program designed and installed within the main building. Additional elements include an outdoor wayfinding program designed and implemented on the hospital campus and existing buildings. An informative wayfinding system for both the expanded facility building. The system will include an outdoor wayfinding program designed and installed on the hospital campus and existing buildings.

Preliminary Scope of Services

The Proposed Wayfinding System (RFQ) is seeking a team of qualified professional planners for both the expanded facility building. The system will include an indoor wayfinding program designed and installed within the main building. Additional elements include an outdoor wayfinding program designed and implemented on the hospital campus and existing buildings. An informative wayfinding system for both the expanded facility building. The system will include an outdoor wayfinding program designed and installed on the hospital campus and existing buildings.

Master Plan and Schematic Design

In this phase, the design firm will develop a master plan and schematic design. The master plan will include a design concept, and schematic design elements like digital wayfinding and donor recognition, if included in the proposal. The overall wayfinding strategy and design will be developed in consultation with the Owner.

Submittal Information

All submittals must be delivered in the form of a comprehensive proposal. The proposal must include:

- Uniform Proposal Outline
- Proposal Submission
- Project Schedule
- Project Mission Statement
- Preliminary Design
- Final Design
- Bid Documents
- Construction Documents
- Construction Drawings
- Final Drawings
- Final Reports

Submission Deadline: Date

The owner reserves the right to reject any or all submittals, interviews, etc., and to waive any formal or informal requirements. The owner may terminate the project or negotiate on behalf of the owner with the consultant(s) involved in the project. The owner may also exercise any other rights or remedies available to the owner under the terms of the agreement. The owner will make the final selection. The owner reserves the right to make any changes to the project scope, schedule, budget, or other elements, subject to the approval of the owner. The owner will make the final selection. The owner reserves the right to make any changes to the project scope, schedule, budget, or other elements, subject to the approval of the owner. The owner will make the final selection.

Description

The Facility [name of the facility] is undergoing a new 300,000 square foot expansion to its main 900,000 square foot building. The entire facility will also be renovated and a new kiosk based on the needs of the hospital campus. New building identity system will be in place and the hospital campus will re-designed to support the population. The master plan will be developed to support the population. The master plan will include a design concept, and schematic design elements like digital wayfinding and donor recognition, if included in the proposal. The overall wayfinding strategy and design will be developed in consultation with the Owner.

Wayfinding Strategy

[The facility] is undergoing a new 300,000 square foot expansion to its main 900,000 square foot building. The entire facility will also be renovated and a new kiosk based on the needs of the hospital campus. New building identity system will be in place and the hospital campus will re-designed to support the population. The master plan will be developed to support the population. The master plan will include a design concept, and schematic design elements like digital wayfinding and donor recognition, if included in the proposal. The overall wayfinding strategy and design will be developed in consultation with the Owner.

Sub-contractors. Also describe any technical, architectural, or other commitments associated with sub-contractors or equipment.

Calendar of Events

- Release of RFP: Date
- Submission of Proposals: Date
- Final Selection: Date
- Beginning of project negotiations: Date

The owner reserves the right to reject any or all submittals, interviews, etc., and to waive any formal or informal requirements. The owner may terminate the project or negotiate on behalf of the owner with the consultant(s) involved in the project. The owner may also exercise any other rights or remedies available to the owner under the terms of the agreement. The owner will make the final selection. The owner reserves the right to make any changes to the project scope, schedule, budget, or other elements, subject to the approval of the owner. The owner will make the final selection. The owner reserves the right to make any changes to the project scope, schedule, budget, or other elements, subject to the approval of the owner. The owner will make the final selection.
Similar Project Experience
Identify three (3) recent Hospital projects similar in size and complexity to the proposed projects in which your firm has provided design and planning services. (Limit: One [1] page per project)

Owner Name
Project description (identify major elements, and/or unique features and service provided)
Project size (SF/# of Beds)
Key personnel from your Firm involved in the project. Client/Architect/contractor reference (name, position, address, and telephone number).

Firm Design Philosophy
A firm design philosophy statement including design approach, project priorities and metrics for project success. (Limit: [1] page)

Proposal Submission

General Information
- The evaluation of proposals will be conducted in the following manner:
- All proposals received will be reviewed in detail and evaluated based upon the information provided.
- The Owner will make the final selection.
- [name of the facility] reserves the right to reject any or all proposals and to waive any formality or informality in proposals received.
- All materials submitted shall become the property of [name of the facility] and will not be returned. The owner agrees to treat these materials as confidential and only to be used for the purposes of selecting a medical communications planner for this project.
- It is understood and agreed by the submitting firms that submittals, interviews, etc., are voluntary and [name of the facility] and/or its employees, agents, etc., are not responsible for any compensation and/or other commitments associated with submittals or interviews.

Short-list Teleconference
A teleconference of selected firms will be held on Day/Date. Preliminary questions by the firms will be submitted in writing on the day before the teleconference.

Additional questions can be asked at the teleconference after the written questions are answered. A recording of the teleconference will be made available to attendees 24 hours after completion.

Interview Requirements
When attending the interview the short-listed firms will provide the following information for review:
- An in-depth proposal for the master plan and schematic design phases of the project including specific fees.
- A preliminary scope of work for the design development and implementation stages of the project based on the firm’s design philosophy and approach. If outside firms are recommended to be included in this stage, this can also be presented.

Interviews will be no more than one hour in length and be attended by no more than three firm principals.

Submittal Information
Calendar of Events
Release of RFP: Date
Proposal deadline: Date and Time
Teleconference with short-listed firms: Date
Firm interviews: Date
Final selection: Date
Beginning of project negotiations: Date
tools in Health Care

Web Best Practices

There has been an explosion in technologies that support dynamic wayfinding and information. These technologies are in a constant state of flux so developing a set of best practices for integrating symbols into computer and Web-based systems require an ability to see not just what exists now, but where they will be one year, five years or ten years from today.

Trends

Health care is undergoing a period important to understand when planning and developing a publication strategy involving new technologies.

Augmented Reality

Augmented reality is mainly of software application development. This has made enormous leaps in the last few years where many institutions are recognizing the key tool to build wayfinding systems. The integration of tags like RISD chips and other devices can locate a specific area and provide information on that area. This process is a methodology where fixed signs and objects in an environment are augmented with additional information.

WalkBrighton is a free software application developed by the Applied Application group for the iPhone that was designed in coordination with the graphics and symbology of the fixed wayfinding system in the environment.

Web Driven Kiosk Technology

Until recently most kiosk systems utilized proprietary software to develop systems in multiple locations. This has changed significantly over the last few years as designers have focused on using web based information systems that can be used on any computer system that uses the web. At the same time specific web standards have been in development for accessible type and language translation on the web making these software systems more adaptable to changes like new screen technologies or improvements in Web-based software like Flash.

Multiple Device Oriented Information Networks

Tweeter as an early software that showed that information on the web can also be utilized on multiple devices including cell phones and public information audio systems. Apple and other software providers have been at the forefront of expanding these systems to many devices in the environment including land-line phones and audio/visual systems.

Impact on Integration of Health Care Symbols

These new technologies and trends greatly impact the symbols are integrated in wayfinding and sign programs. The two biggest changes include:
Best Practices

Flexible information system instead of landmarks on maps

RFID Based Wayfinding Sign System

*Identity Group Passive Dynamic Wayfinding System*

The wayfinding system developed by the Identity Group has dynamic sign information that integrates with static signage. A visitor wearing an ID badge coded to a specific destination is provided the simple arrow-based directions as that person approaches the digital sign. During the intervals between the times that one visitor passes the digital sign and the next visitor approaches the digital sign, that sign automatically reverts to a “default” mode where it provides directions to common destinations such as admissions, cafeteria, and restrooms. Since directional information can be adapted to the specific user symbols can be larger and linked to multilingual information.

Mobile Web

*TriMet Portland Oregon Mobile Web System*

This transit system developed an open source code to deliver wayfinding as well as departure times for the system. Dozens of applications have been developed for this system which provides a palette of maps, symbols and type to use on multiple applications.